Testimony of Allan Rutter, Administrator,
Federal Railroad Administration,
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Mr. Chairman and members of the subcommittee, I appreciate the opportunity to appear before you to discuss the state of railroad safety on our nation's railroads. On behalf of the Federal Railroad Administration (FRA), the agency charged with administering the nation's railroad safety laws, I extend my deepest sympathy to the families of the people who died in recent accidents and to those who were injured. My testimony will explain how FRA's railroad safety program is working daily to reduce the likelihood and severity of accidents such as these and will demonstrate that the state of railroad safety is generally very positive.

FRA's safety mission can be simply stated: help prevent fatalities, injuries, and property damage related to railroad operations and releases of hazardous materials from rail cars, and enhance the security of railroad operations. Under the Federal Railroad Safety Act of 1970, FRA's jurisdiction extends to all areas of railroad safety. We have issued rules on a wide range of subjects including track, signal and train control, locomotives and other equipment, grade crossing signal devices, and operating practices, and we enforce those rules as well as rules related to hazardous materials transportation by rail. We conduct inspections of railroad operations to determine the level of compliance with the laws and regulations, and use a variety of enforcement tools when necessary to encourage compliance. We help educate the public about safety at highway-rail grade crossings and the dangers of trespassing on railroad property. FRA has its own accident investigation authority, and works closely with the National Transportation Safety Board (NTSB) on those accidents that NTSB investigates. FRA investigates a broader range of railroad accidents than NTSB, including those involving three or more deaths at a highway-rail grade crossing, an employee fatality, damages that exceed $1,000,000, or serious injuries to passengers.

FRA tracks the railroad industry's safety performance very closely by requiring reports of accidents and injuries, investigating major accidents, and inspecting railroads and hazardous materials shippers extensively. FRA's safety data base is available on its Web site (see www.fra.dot.gov). FRA uses this information to guide its accident prevention efforts and continually strives to make better use of the wealth of available data to achieve its mission.

The Current State of Railroad Safety Across the Nation

As judged by most indicators, the long-term safety trends on the nation's railroads are very favorable. While not even a single death or injury is acceptable, progress is being made in the effort to improve railroad safety. Based on preliminary figures, last year marked all-time safety records in several important categories. Overall, the total number of rail-related accidents and incidents and the total accident/incident rate were the lowest on record. Also, 2001 saw the lowest number of railroad employee fatalities (22) and injuries (7,575) on record and the lowest overall employee casualty rate (3.19 per 200,000 employee hours). In the period between 1978 and 2001, the number of reported train accidents dropped from 10,991 to 2,962, and the train accident rate fell from 14.62 accidents per million train-miles to 4.17 accidents. Also during this period, the number of train accidents involving a release of hazardous material declined from 140 to 31 despite a significant increase in the number of hazardous materials tank car shipments to more than two million per year. Since 1990, a period in which railroads have transported more than 20 million hazardous materials shipments, three persons have died as a result of the release of hazardous material lading in a train accident.

In other words, over the last two decades the number and rate of train accidents, total deaths arising from rail operations, employee fatalities and injuries, and hazardous materials releases and deaths related to those releases all fell dramatically. In most categories, these improvements were most rapid in the 1980s, and tapered off in the 1990s. (See the attached graph of train accidents and their rate since 1978.) Causes of the improvements included a much more profitable economic climate for freight railroads following deregulation in 1980 under the Staggers Act (which led to substantially greater investment in plant and equipment), enhanced safety awareness and safety program implementation on

the part of railroads and their employees, and FRA's safety monitoring and standard setting.

Similarly, the grade crossing safety picture has shown great progress. In 1990, a total of 698 persons died in highway-rail grade crossing collisions. In 2001, the number was down to 419 despite an increase in exposure due to increased highway and rail traffic. Here, too, improvement has resulted from a variety of sources, including public investment in crossing warning devices and greater awareness of the risks present at crossings on the part of highway users, which was brought about by joint efforts of railroads, employees, FRA, the states, our Department of Transportation partners (Federal Highway Administration, Federal Transit Administration, Federal Motor Carrier Safety Administration, and the National Highway Traffic Safety Administration), and Operation Lifesaver®.

Despite the impression one might get from news accounts of recent accidents, rail remains an extremely safe mode of transport for passengers. In the five-year period between 1997 and 2001, just two passengers were killed in train collisions and derailments, and 13 more in grade crossing collisions, out of the 2.3 billion passengers who rode our nation's commuter and intercity passenger trains. According to the National Safety Council (see attached chart on passenger death rates), the number of deaths per 100 million railroad passenger-miles is quite comparable to the rate for airline passengers, both of which are a fraction of the rate for automobile passengers. Given the strength of rail passenger equipment and the fact that rail passengers are distributed throughout a train in such a way as to minimize the impact of a collision or derailment for many, rail passenger accidents–while always to be avoided--have a very high survival rate.

Unfortunately, not all of the major safety indicators are positive. In recent years, rail trespasser deaths have replaced grade crossing fatalities as the largest category of deaths associated with railroading. In 2001, a total of 508 persons died while on railroad property without authorization, which was an increase of nearly 10 percent over the previous year. Track safety has also emerged as a growing problem. The number and rate of "track-caused" accidents have actually increased over the last few years. For the first time in many years, in 2001, track causes actually exceeded human factors as the largest category of train accident causes. In that year, track causes were cited in about 38

percent of all reported train accidents, while human factors accounted for about 34 percent, equipment causes were responsible for about 14 percent, signal-related factors were causal in about one percent, and miscellaneous causes accounted for the remainder.

Any discussion of the railroad accident data, however, must take into account the fact that, under the current reporting threshold, any train mishap resulting in at least $6,700 in damage to railroad equipment or structures must be reported as a "train accident." This means that many "fender benders" and mechanical malfunctions that pose no danger to either the public, railroad workers, or railroad operations meet the reporting threshold and are classified by FRA as train accidents. For example, FRA recently analyzed the number of train accidents in its database that occurred on Amtrak's Northeast Corridor over the past five years. While the raw data contained 101 events that were classified as train accidents, closer examination revealed that 84 incidents involved mechanical malfunctions or damage to the overhead electrical equipment. These malfunctions cause a loss of electrical power that interrupts train service but causes no harm to the passengers. There were also three cases of vandalism to trains, five cases of trains striking debris and animals on the track, three incidents in which no passenger train was involved, and one fire caused by a cigarette in restroom debris. In fact, of the 101 total accidents reported on Amtrak's Northeast Corridor over the five-year period, there were only three train derailments, two of which occurred at very low speeds, and there were two cases where an Amtrak train struck unsecured equipment protruding from passing freight trains.

Another factor to consider when discussing train accidents is that the severity of accidents can vary greatly. More than half of all train accidents occur in yards where train speeds are low, resultant damages are minor, and casualties are rare. Consider, for example, that train accidents, as FRA uses the term, resulted in only six of the 966 deaths associated with railroading in 2001. The vast bulk of those fatalities involved grade crossing incidents (419 deaths) and trespassers (508 deaths). Given the limited usefulness of the aggregate data, FRA tries to continually mine the accident and inspection data at its disposal to find where the major pockets of risk exist and then determine how its actions can

produce the biggest safety returns.

FRA is also quite concerned at the number of recent train collisions in which human performance appears to be a primary contributing factor. Since the Placentia, California collision in April of this year, there have been seven more serious collisions. In many of these cases, we believe that compliance with the railroad's own operating rules on signals and restricted speed may have prevented the accident. As explained more fully below, FRA has recently launched a nationwide, focused effort to examine how the railroads are implementing their own programs for testing their employees' compliance with these important safety rules.

FRA's Safety and Security Program

FRA's safety program is the heart and soul of the agency. The program has several elements: setting safety standards, ensuring compliance with those standards, focusing attention on serious safety problems whether or not covered by current standards, educating the rail industry on the federal standards and the public on rail safety issues, focusing on emerging security issues, investigating accidents and employee fatalities, conducting research and development on safety issues, and setting the tone for safety efforts in the industry.

The program's most important element, of course, is its people. Our Office of Safety headquarters staff of 100 works on the gamut of activities including rulemaking, compliance, data analysis, and program management. Our field force of 486 (which includes safety inspectors, support staff, and managers) works on inspection and compliance activities, investigations, and outreach to communities and the public on safety issues. More than 160 certified state safety inspectors from 30 states supplement the efforts of our field forces in all of these areas. Supporting the Office of Safety is the Safety Law Division of the Office of Chief Counsel, our Office of Administration (which provides human resource, budget, information technology, and procurement support), our public affairs staff, and our research and development office.

Setting Safety Standards

Congress has authorized FRA, as the delegate of the Secretary of Transportation, to issue

necessary regulations and orders for every area of railroad safety. Since FRA's inception in 1967, the agency has issued a wide range of standards on subjects such as track safety, signal inspection, freight car safety, passenger car safety, locomotive safety, power brakes, alcohol and drug testing, operating rules and practices, accident reporting, hours of service recordkeeping, railroad communications, roadway worker and bridge worker protection, engineer qualifications, grade crossing signal maintenance, and passenger train emergency preparedness. FRA also assists the Department of Transportation's Research and Special Programs Administration (RSPA), which issues hazardous materials standards for all modes of transportation, in developing standards for rail transportation of those materials.

In 1996, FRA established the Railroad Safety Advisory Committee (RSAC) to develop consensus recommendations on safety issues. RSAC contains representatives from all major groups interested in railroad safety, including railroads and their associations, railroad labor organizations, the states, suppliers, and public interest groups. The NTSB and representatives from Mexico and Canada are associate members of the committee, as are a number of groups added to ensure RSAC's diversity. FRA seeks RSAC's recommendations on specific tasks; on each task, RSAC can decide whether or not to accept it and begin work. On those tasks it accepts, RSAC members appoint a working group of those most involved with the subject covered by the task. If the working group's recommendations are unanimously adopted by that group and by a majority of the full RSAC, they are sent to the FRA Administrator. While FRA is free to accept or reject RSAC's recommendations, we fully engage ourselves in the working group process to ensure that the recommendations are consistent with FRA's goals for the rulemaking project. As a result, our proposed and final rules that arise from RSAC recommendations usually incorporate those recommendations substantially.

This consensus approach to rulemaking has produced notable successes: revised track safety standards that include rules for high speed operations, revised communication standards reflecting technological advances in the field, and updated certification standards for locomotive engineers. More important, RSAC has helped engender a cooperative approach to developing new safety rules in which

the railroad industry's major players have the opportunity to shape FRA's, and each other's, thinking from the start and feel more invested in the final product.

FRA's recent standard-setting accomplishments include the first standards for passenger cars, issued in 1999, which were the product of a rule-specific consensus process separate from RSAC; power brake standards for freight service, which FRA issued in 2001 without the benefit of consensus recommendations after an unsuccessful attempt to achieve consensus; and, issued just this year, the first standards for locomotive cab sanitation, which are the product of the RSAC process. Late in 2001, we issued an interim final rule establishing a United States locational requirement for dispatching domestic train operations.

FRA has several important regulatory projects under development. We are developing, through the RSAC process, standards for processor-based signal and train control systems (discussed more fully below), which will lay the foundation for integrating such systems into the existing rail network. We hope to have a final rule out this year. We are also using the RSAC process to develop revised event recorder standards to facilitate movement to a new generation of recorders and standards for the crashworthiness of locomotives. One major rulemaking on which we are not using the RSAC process is our final rule on the use of train horns at grade crossings. While very broad-based, RSAC membership is not sufficiently broad to include all the interests that might be directly affected by this rule. Instead, to address this sensitive subject, we held a dozen public hearings across the country and a technical conference and have engaged in extensive outreach with local communities.

Whether or not we employ the consensus process of RSAC, in all of our standard-setting activities we strive to avoid unnecessary regulation, consider all reasonable options, and issue rules that embody a fitting balance between benefits and burdens, are clearly stated, and are enforceable. However, neither the consensus rulemaking process nor the more traditional process is designed for quick action. Rulemaking can take a very long time. My philosophy is to try to do fewer things better and more quickly rather than trying to write simultaneously every rule that might have found its way onto the agency's agenda. This fits with the Department's renewed emphasis on rulemaking timeliness, which

entails enhanced methods of coordinating and monitoring regulatory projects and tighter control of the clearance process.

Encouraging Compliance and Safety Improvements

The railroads, of course, have the responsibility for compliance with the standards FRA sets and to perform the necessary inspections and tests to ensure that they do comply. There are more than 650 railroads in the nation operating more than 1,000,000 pieces of equipment over more than 200,000 miles of track. FRA's inspection force cannot possibly observe all railroad activity. Instead, FRA monitors railroads to determine their level of compliance with those standards and employs a variety of tools to encourage compliance. We start with the assumption that railroads and their employees want to do the safe thing for their own benefit, not just because a law or regulation requires it. And we also understand that the Code of Federal Regulations is not the sole source of wisdom on safe practices; there are, in fact, safety problems not covered by existing rules that require a solution nonetheless.

FRA calls its approach to compliance the Safety Assurance and Compliance Program (SACP). The basic principles of SACP are to look for root causes of safety problems, try to develop solutions to those problems cooperatively with railroad management and employees, and focus both inspection activity and the use of enforcement tools on the most serious safety risks, as revealed by our inspections and our accident data. On each of the major railroads, SACP teams include FRA inspectors and managers, railroad officials, and employee representatives. The SACP teams provide a forum for resolving both compliance issues and safety problems not within the four corners of existing rules. Issues can be resolved through informal agreements or formal action plans. At the same time, FRA continues its normal review of railroad activities through regular inspections of facilities, vehicles, operations, and records and investigation of complaints.

FRA's policy is one of focused inspection and enforcement. That is, we try to concentrate our inspection efforts on detecting conditions that are leading causes of accidents, injuries, and hazardous materials releases, and, where noncompliance is found, we try to focus our enforcement efforts on violations that may cause such events. Where routine inspections reveal minor defects that pose little

risk, FRA will certainly address the noncompliance with the railroad but is not likely to take enforcement action. Where a railroad has acknowledged the existence of a serious safety problem, developed a plan for alleviating it, and implemented that plan in a timely way, FRA will ordinarily take no enforcement action in the absence of some immediate hazard. However, FRA is very likely to use its enforcement tools where FRA discovers serious safety violations causing an immediate and unacceptable risk that the railroad should have found and corrected on its own. FRA is also likely to take enforcement action where, even though there is no immediate hazard, FRA has identified serious rail safety problems requiring concerted action by the railroad to prevent an unacceptable risk from developing, and the railroad has failed to make a good faith effort to implement a specific remedial program to fix those safety problems by a date certain, despite having agreed to do so.

Where enforcement appears necessary to encourage compliance, the tool we use will depend on the circumstances. Civil penalties are the most frequently used tool. In fiscal year 2001, for example, FRA collected over $7.6 million in penalties from railroads and hazardous materials shippers. Our Office of Chief Counsel, based on the recommendations of our field inspectors and working closely with the Office of Safety, assesses and collects these penalties. As the safety statutes encourage us to do, we settle nearly all of these cases through negotiations with railroads and shippers, and determine settlement amounts by applying the settlement criteria stated in the safety statutes. The settlement negotiations provide an excellent forum for addressing the most current and serious compliance issues that have not been resolved through more cooperative methods.

FRA has several other enforcement tools. Our inspectors can issue special notices removing locomotives or freight cars from service until they are repaired, or lowering the speed of track to a speed at which the track segment is in compliance with the standards. We sometimes enter into compliance agreements with railroads in which the railroad promises specific remedial actions and, should it fail to deliver on its promise, agrees to the imposition of a compliance order, emergency order, or particular fines. The FRA Administrator can address an imminent safety hazard by issuing an emergency order, with opportunity for review of the order after its issuance. Civil penalties are available

against individuals who willfully violate the safety regulations, and FRA may disqualify individuals from safety-sensitive service if their violation of safety regulations demonstrates their unfitness for such service. Criminal penalties apply for certain willful violations of the hazardous materials rules and knowing and willful violations of recordkeeping or reporting requirements. We have made increased use of these criminal penalties in recent years, especially for serious violations of the rules concerning proper documentation of hazardous materials shipments.

Accident Investigations

Nearly a century ago, Congress gave FRA's predecessor, the Interstate Commerce Commission (ICC), the authority to investigate railroad accidents. FRA inherited that authority and continues to implement it. Where the NTSB decides to investigate, its investigation generally has priority over those of all other federal agencies, but does not extinguish the investigative authority of those agencies. In those cases, which usually involve the most serious accidents, our investigators work closely with NTSB and serve on NTSB's teams. As previously noted, FRA also investigates a broader category of accidents and incidents than does NTSB.

Most or all of the recent accidents that concern this Committee are still under investigation by NTSB , FRA, or both. Final determinations of probable cause will not be issued for some time. I refer you to NTSB's testimony for any details of its investigations that the Board may be able to share at this time.

The final, detailed reports that NTSB and FRA produce concerning accidents are a very important tool in identifying risks and determining what actions FRA may need to take to reduce those risks. While FRA pays very close attention to major accidents to determine what conditions might require immediate agency action, those accidents sometimes involve such unique combinations of causal factors and often take so long to analyze effectively that they do not offer immediate insights into actions that might prevent similar accidents. However, because FRA's role is regulatory and not just investigative, where FRA gleans any useful information from investigations while they are underway, we use it immediately to try to prevent a recurrence.

Research and Development

FRA has an extensive research and development (R&D) program. Although that program resides in our Office of Railroad Development rather than our Office of Safety, its primary mission is to serve the safety program. Our R&D efforts also serve the railroad industry, railroad employees, and suppliers of railroad equipment. FRA owns the Transportation Technology Center near Pueblo, Colorado, which is operated under contract by a subsidiary of the Association of American Railroads (AAR).

FRA's R&D program includes these elements:

- The Railroad System Issues element encompasses research on technological and operational developments in the industry that may affect safety; system safety planning; and physical and cyber security in the railroad system.

- The Human Factors element focuses on human performance in railroad operations (e.g., the effects of fatigue) and at grade crossings (e.g., the interface between highway users and visual and audio warnings).

- The Rolling Stock and Components element focuses on improvement of equipment defect detection and control via wayside and onboard technology and the development of advanced materials.

- The Track and Structures element focuses on improved methods of detecting hazardous conditions that can lead to failure of rails or structures.

- The Track/Train Interaction program assesses improved methods for reducing derailments due to interactions of track structures and vehicles.

- The Train Control program involves facilitation, risk analysis, testing, and evaluation of new train control systems, including positive train control.

- The Grade Crossings program focuses on technical aspects of crossings such as train presence detection, crossing geometry, and warning device technology.

- The Hazardous Materials element addresses the design and structural integrity of tank cars.

- The Occupant Protection element looks at the structural crashworthiness of locomotives and passenger cars through simulations, laboratory tests, and full scale fire and impact tests.

A theme running through virtually all of the R&D program elements is the use of sensors, computers, and digital communications to collect, process, and disseminate information to improve the safety, security, and operational efficiency of railroads. Along the lines of the Intelligent Transportation Systems being developed in the highway and transit industries, FRA and the railroad industry are working on the development of Intelligent Railroad Systems that would, in an integrated way, incorporate the sensor, computer, and digital communications technologies into train control, braking systems, grade crossing protection, track and equipment defect detection, and scheduling systems as well.

The R&D program also includes the Next Generation High-Speed Rail Technology Demonstration Program, which will help develop and demonstrate the utility of positive train control, a high-speed non-electric locomotive, innovative grade crossing warning systems for application on high-speed corridors, and innovative methods of constructing track and structures suitable for high-speed passenger operations and heavy axle load freight operations. Our R&D office is also implementing the Magnetic Levitation Technology Deployment Program.

FRA's Strategies for Accident Prevention

FRA combines all of the elements of its safety program to address current problems that are likely causes of accidents, injuries, and hazardous materials releases. Railroad safety contains several sub-fields, or disciplines. For each discipline, I will give some examples of how the safety program elements have been brought to bear on safety problems.

Human Factors

Human performance, especially that of railroad employees and their immediate supervisors, is critically important to railroad safety. Human factors cause about a third of train accidents and a large portion of employee injuries every year. In the 1980s, FRA identified abuse of alcohol and drugs by operating employees as a major contributor to serious railroad accidents. In 1985, the agency issued the nation's first alcohol and drug testing requirements for private sector employees. At first, railroad

employee organizations opposed those rules all the way through the Supreme Court, where the rules were upheld in a landmark case in 1988. The rules have proven enormously successful and have virtually eliminated the use of alcohol and illegal drugs as a cause of train accidents. Although no one likes being tested, many employees have praised these rules as having greatly improved the safety of the industry and, in some cases, the lives of individual employees whose substance abuse has been addressed because of the rules. FRA is currently exploring the subject of legal drug use as a factor in accident causation, having been urged to do so by NTSB.

A more recent example of FRA's efforts to use the various elements of its safety program to address an area of serious safety risk is the Switching Operations Fatality Analysis (SOFA) Working Group. In the late 1990s, FRA realized that an increasing number of employee fatalities and serious injuries were occurring in the context of switching operations. FRA organized the SOFA Working Group to develop recommendations for preventing such casualties. Representatives of the AAR, the United Transportation Union, the Brotherhood of Locomotive Engineers, and The American Short Line and Regional Railroad Association analyzed 76 fatal switching incidents that occurred between 1992 and 1998. The Working Group recommended five basic practices (the "SOFA lifesavers") that, if followed invariably, would prevent such fatalities: notification to the engineer before fouling the track; extra precautions when two or more crews are working on the same track; a safety briefing before the work begins; proper radio communications; and paying special attention to crew members with less than one year of service. The recommendations were voluntarily adopted by railroads across the nation. The Working Group continues to track and report on switching incidents. Switching fatalities have dropped from thirteen in 2000, to eight in 2001, to two so far this year, while both the number and rate of yard accidents declined 8 percent and 4.6 percent, respectively, in 2001. This is an example of how consensus, non-regulatory actions can be very effective in some circumstances.

Even more recently, FRA has taken action to address a sudden spate of train collisions in which human performance appears to be a primary contributing factor. On April 23, 2002, in Placentia, California, a Burlington Northern Santa Fe freight train collided with a Southern California Regional Rail

Authority passenger train, resulting in two fatalities and 161 injuries. We believe the freight train passed a restrictive signal. In just the past two months, there have been seven additional train collisions. Including Placentia, four of these collisions involved passenger trains and resulted in two fatalities and 258 injuries, and the other four collisions involved freight trains and resulted in one fatality and 21 injuries.

While the investigations of these accidents are not yet complete, in each case the early indications are that human error appears to have been a primary causal factor. The errors included running past restrictive signals, failing to comply with restricted speed requirements, and failure to broadcast on the radio the location of the train. All of these behaviors violate railroad operating rules, and in some cases FRA safety regulations. FRA requires railroads to conduct periodic operational tests and inspections to determine the extent of their employees' compliance with these critical operating rules. These "efficiency tests," as they are widely known, entail direct observations of employee performance during train operations.

On June 28, 2002, I wrote to the major railroads, commuter railroads, labor organizations, and trade associations to announce a focused effort to examine railroad efficiency testing programs. During the next several months, FRA and state safety inspectors will be working intensively with railroad officers to examine each major railroad's efficiency testing procedures, techniques, and results. We believe that improving the quality of efficiency testing programs will play an important role in stemming this unfavorable trend.

Fatigue on the part of operating employees has long been an important safety issue. Congress first addressed the subject by enacting the Hours of Service Act in 1907, which limited duty tours for train crews to 16 hours. As a result of amendments in 1969, that maximum was eventually reduced to 12 hours on duty in a 24-hour period. Off-duty periods must be at least 8 consecutive hours or, if the employee works 12 consecutive hours, the off-duty period must be at least 10 consecutive hours. FRA does not have authority to change these statutory parameters. Even if these restrictions are observed, train crews can work an enormous number of hours in a week, month, or year. While commuter train

crews may have some predictability in their work schedules, crews of road trains rarely do. The long hours, irregular work/rest cycles, and lack of regular days off combine to have a very deleterious effect on employee alertness.

Operating employee fatigue is clearly a reality. The causal relationship between fatigue and particular train accidents or injuries has been clearly demonstrated in some instances, and fatigue is suspected as a causal element in many of the human factor accidents that comprise a large percentage of all train accidents. The NTSB has listed employee fatigue in all modes of transportation among its top ten "Most Wanted" recommendations. While research conducted by the Department of Transportation and others has demonstrated that fatigue impairs mental acuity, judgment, and reaction times, the cause of any specific human performance failure can be extremely difficult to pinpoint; therefore, it is often difficult to prove the exact role that fatigue may have played in a specific accident or what role fatigue plays in accident causation as a general matter.

Even more difficult is deciding how to address fatigue effectively. The major railroads and leading labor organizations have entered into a variety of arrangements in the last several years in an attempt to manage fatigue. These efforts to minimize the impact of fatigue have been significantly enhanced by utilizing the partnerships resulting from the SACP and the North American Rail Alertness Partnership (NARAP). The latter, a voluntary coalition of rail labor, management, governmental entities including FRA, and other concerned parties, has been especially fruitful in identifying fatigue concerns *and* solutions. As the result of partnership efforts, the following measures are becoming the norm throughout the industry: undisturbed rest periods; improvements in lodging facilities, including single occupancy; on-duty napping policies, especially for the operating crafts; work/rest refinements, e.g., balancing operational requirements with appropriate work/rest schedules; educational measures on fatigue management that consider the families of employees; and screening for sleep disorders.

In addition to facilitating NARAP's cooperative efforts, FRA has embarked on a vigorous program to address a multitude of fatigue-related concerns through research on subjects that include: alertness of crew van drivers; measurement tools for assessing the success of fatigue countermeasures;

individual fatigue awareness and behavioral change; alertness training videos; and analysis of a number of accidents/incidents using a software model designed to determine the impact of fatigue on performance.

FRA will continue to monitor the results from these various cooperative arrangements and research projects on fatigue and, as the need arises, recommend legislative action, take relevant regulatory action (to the limited degree it may do so in this context), or both.

Track and Structures

As mentioned previously, track-caused accidents have been on the rise in recent years, and track became the leading accident cause in 2001. Reasons for this increase and the deterioration in track conditions it reveals are not certain, but may include reduced investment in infrastructure, reduced maintenance-of-way staffs, insufficient training or monitoring of railroad track inspectors, increased traffic, increased axle loadings, and/or higher speeds. Of course, conditions vary from railroad to railroad.

FRA recently had great success in working with CSX Transportation, Inc. (CSX) to improve its track safety program. In 2000, FRA and state inspectors discovered disturbing patterns of noncompliance on CSX involving track gage, track inspection, and track repair. Track-caused accidents were on the increase. FRA and CSX entered into a unique compliance agreement that blended cooperative aspects with strict enforcement. Under the agreement, CSX promised to take specific steps to improve its use of track geometry vehicles, implement revised instructions for track inspections, develop performance standards and quality control teams for large scale track work, enhance management oversight of track inspections, and provide FRA with its capital improvement and maintenance programs for the next three years. CSX also agreed that it would pay fines without contesting them if FRA discovered any unacceptable track conditions posing an imminent hazard to train operations, and that FRA was authorized to issue a compliance order or emergency order that CSX would not contest if CSX failed to comply with the agreement. CSX took the necessary actions under the agreement (although it paid some uncontested fines along the way) and, within a year, had reduced

its track-caused derailments substantially. FRA and CSX renewed the agreement for a second year, although, because of CSX's excellent performance, without certain of the original agreement's harsher enforcement provisions. The agreement expired on May 1st of this year, and the second year's results were also impressive: the number of track-caused derailments on CSX in 2001 was 25 percent lower than the number for 2000. The compliance agreement, coupled with CSX's commitment, brought about significant safety improvement.

The trend on track-caused accidents, however, is national in scope. To help address the problem FRA has sought and obtained 12 additional track inspector positions in fiscal year 2002, and the President's budget for fiscal year 2003 contains a request for an additional 12 positions.

In addition to augmenting its track resources, FRA has brought a fresh perspective to enforcement in the track area. In January 2002, FRA issued a new track enforcement manual in that makes focused enforcement a reality. The manual provides guidance on how to focus inspections on the leading causes of train accidents and strongly recommends taking enforcement action when certain very serious violations are found. FRA is making use of its new resources and more focused enforcement policy to address the track compliance problem. We will blend cooperative measures and tough enforcement to get the job done, as we did with CSX in recent years. For those who may be less willing than CSX was to meet the challenge head on, we will use whatever level of inducement is necessary to ensure improved compliance and safety results.

America's more than 100,000 railroad bridges are generally quite old but in most cases structurally sound. Many of the large bridges were designed to carry the heavy steam locomotives of their time and have a reserve capacity to safely carry today's railroad traffic. However, present-day car weights are approaching the design capacity of these bridges, and because of increasing traffic density on main routes, some of these bridges require increasingly intensive inspections and higher maintenance expenditures if they are to remain serviceable. Some shortline railroads lack sufficient capital to upgrade smaller bridges to handle the increasing weights of the latest generation of freight cars. FRA has had to issue two emergency orders against small railroads removing bridges from service when their

owners failed to properly evaluate and repair conditions that posed a risk of catastrophic failure. In 2001, FRA entered into a successful compliance agreement with a regional railroad in which the railroad agreed to evaluate and repair its bridges in an orderly way as an alternative to emergency action by FRA.

Serious bridge safety problems have occurred infrequently, and FRA has been able to resolve them on a case-by-case basis without issuing mandatory regulations. Such rules would be very complex and could cause unnecessary expenses by requiring railroads to adapt their successful but varied bridge management practices to a common Federal standard. In 2000, rather than issuing binding rules, FRA issued a bridge safety policy that establishes suggested guidelines for bridge inspection and management. The policy (49 C.F.R. Part 213, Appendix C) makes clear that, if a bridge owner jeopardizes public and employee safety by failing to resolve a bridge problem, FRA will use any appropriate enforcement tool, including an emergency order, to bring about elimination of the hazardous bridge conditions.

Hazardous Materials

The safety of hazardous materials transportation by rail depends to a large degree on safe track, equipment, and operating practices to ensure that the hazardous materials container is not involved in a train accident. The hazardous materials discipline, on the other hand, focuses on the integrity of the containers that hold the hazardous materials, the proper identification and marking of those containers, the use of appropriate shipping documents identifying the hazards presented by the material, the proper handling of the vehicles that contain these materials, and training of all who play a role in the preparation of these shipments and their movement. Within the Department, RSPA provides excellent leadership on these matters, which cut across the different modes of transportation.

Railroads have an outstanding record in moving hazardous materials safely. Releases of those materials as a result of train accidents are down sharply from earlier years. However, releases from stationary tank cars in rail yards or chemical facilities are a continuing problem. The primary cause of these releases is improper securement of the cars by the shipper. Much of FRA's enforcement efforts in this area are against shippers who commit these securement violations or improperly describe the

shipments, which impedes appropriate handling and emergency response. Some of our investigations have led to criminal charges being brought against companies that prepare shipping papers for other companies and do so improperly.

Our hazardous materials staff closely tracks reports of hazardous materials releases or problems with the integrity of railroad tank cars. This has enabled FRA to stay ahead of emerging problems before they lead to tragic results. For example, we have on several occasions discovered patterns of cracks, deterioration, and even structural failure in particular portions of the tank car fleet. After thorough analysis of the problem, we have brought pressure to bear to ensure that all cars of the type shown to exhibit the problem are promptly inspected and, if necessary, repaired. We have done this through emergency orders and, more recently, through use of a new regulatory provision that permits FRA to require special inspections of tank cars in these situations. We believe these actions, which draw little public attention, have prevented a number of significant releases of hazardous materials.

FRA has also taken a proactive approach to the transportation of spent nuclear fuel and high-level radioactive waste. Our Safety Compliance Oversight Plan for transportation of those materials involves participation in route planning, ensuring proper training of railroad employees and emergency responders, and more intensive inspection of routes, equipment, and operations involved in those shipments.

Motive Power and Equipment

Congress began regulating railroad equipment by enacting the first Safety Appliance Act in 1893 and the Boiler Inspection Act in 1911. FRA has established standards for safety appliances (features of rail cars intended to prevent injury of the employees who work on and around them), power brakes, locomotives, and freight car components. We are currently implementing the first standards for passenger equipment, and revised standards on power brakes and their inspection. We are drafting standards for the crashworthiness of locomotives.

While equipment-caused accidents have trended slightly upward in recent years, they still account for a relatively small portion (18 percent) of all accidents. However, certain equipment failures

can lead to devastating accidents, especially at higher speeds, and poorly maintained equipment can cause serious employee injuries. Accordingly, FRA inspectors carefully monitor railroad compliance with the equipment standards and employ civil penalties and special notices for repair as ways of encouraging compliance on serious matters. FRA's R&D efforts may play a very important role in developing improved methods of detecting equipment defects before they cause accidents.

As this decade unfolds, FRA hopes to find ways of encouraging the railroads to use electronically controlled pneumatic (ECP) braking. The AAR has been at the forefront in developing this technology and making sure it is mature. Now railroads need to take advantage of ECP train braking, which can reduce stopping distances and in-train forces, making it much easier for locomotive engineers to safety handle heavy tonnage trains and consists containing cars of various sizes and weights.

Signal and Train Control

Recent collisions, including the fatal collision of April 23rd between a Burlington Northern Santa Fe freight train and a Metrolink commuter train at Placentia, California, remind us that current methods of train operation rely too heavily on crew recognition of, and compliance with, signal indications (or with mandatory directives in written form). FRA is supporting deployment of advanced signal and train control technology to improve the safety, security, and efficiency of freight, intercity passenger, and commuter rail service. These new systems will use various technologies to determine the precise location of trains and automatically control their movements when necessary to prevent a collision. This developing family of technologies, which we have referred to as Positive Train Control (PTC), is capable of preventing train collisions, overspeed derailments, and casualties to roadway workers (e.g., maintenance-of-way workers, bridge workers, signal maintainers) operating within their limits of authority and can meet mandatory requirements for train control systems on developing high speed corridors wherever train speeds will exceed 79 mph. This technology has the potential capability to limit the consequences of events such as hijackings and runaways that are of special concern in an era of heightened security. Looking well out into the future, PTC will integrate a wide array of hazard sensors to protect train movements and will provide the platform for more cost effective warning of motorists at

highway-rail crossings as a part of Intelligent Transportation Systems (starting with priority vehicles such as school buses and tractor trailers carrying hazardous materials).

Communications-based PTC will be more affordable than signal-based systems such as automatic train control (ATC) and will address a wider range of safety needs. FRA is promoting PTC by describing the necessary conditions for its introduction, putting in place more flexible regulations, investing expertise and funding in development and demonstrations of the technology, and requiring the use of technology addressing PTC functions where it is clearly warranted to do so.

Describing the necessary conditions. FRA's RSAC provided a Report to the Administrator on ***Implementation of Positive Train Control Systems*** in September of 1999. The report resulted from extensive effort by a working group comprised of representatives of railroads, rail labor organizations, states, and suppliers. One major result of the activity is increased understanding by all parties of the complexities of designing, installing, operating, and maintaining the proposed systems. FRA transmitted this report to the Congress on May 17, 2000, and it is available on our Web site at www.fra.dot.gov (under "Documents" for the year 2000). The report describes the safety and business uses of PTC systems and a variety of potential PTC architectures. The report documents the fact that risk is widely dispersed on the national rail system and that it will be necessary to implement PTC on a large scale in order to address the reality of locomotives which often move throughout the national rail network. The working group carefully studied the record of "PTC-preventable" accidents and developed cost estimates for various levels of PTC. The ultimate conclusion was that, based on safety benefits alone, PTC cannot be justified on a large scale. However, the RSAC remained optimistic that, as the technology is proven, unit costs decline, and the business benefits of the technology become better evident (e.g., as limitations on rail capacity make it more important to precisely monitor and control rail traffic), passenger and freight railroads will find it attractive to make the necessary investments.

In anticipation of these developments, the RSAC described several things that industry and government need to do to support the growth of this life-saving technology. The major actions and the

status of those activities follow.

Providing safety standards that fit the need. The RSAC recognized that existing signal and train control regulations (49 C.F.R. Part 236) were built around older technology and present potential obstacles to change. As a result, on August 10, 2001, FRA published a notice of proposed rulemaking on Performance Standards for Processor-Based Signal and Train Control Systems that was the consensus product of the RSAC. The RSAC Working Group has met to consider recommendations for finalizing the rule. Consultations among members are continuing to resolve a significant remaining issue, and the Working Group is also helping to develop a risk assessment toolset that can be used to make the necessary safety case for new systems under the rule.

Developing and deploying technology. The RSAC also recognized that public and industry investment was necessary to "jump start" PTC deployment by advancing the design process and by providing evidence that the technologies will be reliable as installed. Since advanced train control systems are mandatory where speeds above 79 mph are proposed, developing and demonstrating practical, affordable train control technology have been major program elements of FRA's Next Generation High Speed Rail technology development program. In 1995, FRA joined with Amtrak and the State of Michigan to install an Incremental Train Control System (ITCS) on Amtrak's Michigan line to support proposed higher passenger operating speeds on the Detroit-to-Chicago corridor. This project includes high-speed grade crossing signal pre-starts and integration of remote health monitoring for crossing signals (so that the train is slowed if proper warning will not be provided). On April 18, 2001, Amtrak turned on ITCS for revenue service, and an increase in train speeds to 90 mph was authorized by FRA in January 2002. The system is designed to support operations to 110 mph.

On January 23, 1998, as the RSAC was engaged in its initial work, FRA joined with the AAR and the State of Illinois to begin development of a high-speed PTC project for the St. Louis-Chicago corridor. The project has now been integrated into the North American Joint PTC Program. AAR is contributing $20 million and providing project management. The Illinois Department of Transportation

is providing over $12 million, and FRA is providing over $28 million as part of the Next Generation High Speed Rail Program (NGHSR). With funds in the FY 2002 appropriation, the $60 million project total estimate is now fully funded. Lockheed Martin, the System Development/Integration contractor, and program participants are finalizing software and beginning installation of hardware. The system is expected to be ready for revenue service by mid-2003. FRA is working with the project team regarding necessary safety approvals. The North American PTC Program is also the venue for the industry's development of standards for PTC interoperability (further discussed below).

Utilizing funds provided specifically for this purpose, FRA is also working with the Alaska Railroad to identify a migration path to PTC on their current rail lines, which are currently operated without the benefit of signal systems.

Conceiving standards for interoperability. The RSAC also recognized that, were the various railroads to "go their own way" in designing PTC systems, the result would be either excessive cost (as various train control devices were placed on many locomotives) or limited functionality (with trains from one railroad running "unequipped" on other railroads). This has always been a matter of concern for Amtrak and commuter authorities that operate on the lines of multiple railroads, but is of increasing concern today because of the freight railroads sharing of locomotives and the extensive networks of trackage and haulage rights conferred in connection with recent rail mergers in order to preserve competition. Accordingly, the North American Joint PTC Program has been selected as the venue for the industry's development of standards for PTC *interoperability.* Interoperability refers to the ability of a train to move from one railroad to another (or from one type of train control system to another) at track speed while under continuous supervision of the train control systems. The North American Joint PTC Program has not completed the desired standards for interoperability, but work is underway including agreement on a flexible, modular approach to meet the needs of diverse railroad operations and establishment of a master database to standardize the messages transmitted by various PTC systems. Two industry task forces with participation from railroads, suppliers, and FRA are working to standardize the application of electronic devices aboard locomotives and the use of wireless

communications by railroads, both critical to the ultimate success of PTC systems.

Ensuring adequate radio frequency (RF) capacity. The RSAC recognized that RF data link technology would be the critical communications medium within PTC, particularly to connect trains with the wayside infrastructure and the central office. All across the national economy, greater and greater demands are being made on the inherently limited RF spectrum. During the late 1990s, the Federal Communications Commission conducted proceedings for "refarming" of assigned frequencies; and FRA supported rail industry requests to retain existing frequencies available for railroad voice and data communication free of interference from adjacent channels (with splitting of existing railroad channels to make better use of the assigned frequencies). These efforts were successful, and the industry and FRA continue to study whether existing RF capacity will be fully adequate for PTC and related safety and business requirements. In partnership with the industry Wireless Communications Task Force, FRA is sponsoring the establishment of a radio communications testbed at the Transportation Technology Center in Pueblo, Colorado, to provide a means for objective, repeatable testing of the critical communications links which will be essential for widespread deployment of PTC systems as well as other railroad operations.

Providing precise and secure positioning. The RSAC also recognized the importance of providing, as a public utility, a nationwide positioning service sufficiently precise to support PTC. In order to meet this need and other surface transportation requirements, FRA became the Federal program sponsor of the Nationwide Differential GPS (NDGPS) Program. This augmentation to the Global Positioning System (which uses a constellation of satellites to broadcast positioning information for military and civilian purposes) provides more precise positioning and continuous integrity monitoring in support of safety-of-life applications for surface transportation and other purposes. NDGPS effectively addresses limitations associated with uncorrected GPS signals and provides one-to-two-meter positioning accuracy. NDGPS is an expansion of the U.S. Coast Guard's Maritime DGPS network and makes use of decommissioned U.S. Air Force Ground Wave Emergency Network (GWEN) sites to calculate and broadcast the differential correction signals. NDGPS is now operational

with single-station coverage on about 85 percent of the land area of the U.S. To ensure continuity, accuracy, and reliability, NDGPS is managed and monitored 24 hours a day, seven days a week from the Coast Guard's Master Control Stations at Alexandria, Virginia, and Petaluma, California. NDGPS signals are available to any user who acquires the proper receiver.

Requiring PTC where justified. FRA has authority under the former Signal Inspection Act (now codified at 49 U.S.C. §§ 20501-20505) to require installation of a signal or train control system where that is necessary in the public interest. This authority has been used by FRA and its predecessor agency (the ICC) to address specific needs primarily related to the safety of rail passenger service. In 1998, as a part of the preparations for enhanced service on the Northeast Corridor (NEC), FRA ordered Amtrak to implement the Advanced Civil Speed Enforcement System (ACSES) on the NEC between Boston and New Haven and in high-speed territory south of New York City. ACSES, which was implemented beginning in October of 2000, supplements the existing cab signal/automatic train control system on the NEC, providing full PTC functionality in support of operations up to150 mph. In late 2001, New Jersey Transit (NJT) began progressive implementation of an ACSES-compatible system on its property by activating the system on an initial line segment.

ACSES and the NJT system are primarily overlays on traditional signal and train control technology, filling gaps that the older technologies cannot address. For instance, existing ATC systems cannot enforce a stop at a signal (although they can ensure that the train slows to 20 mph approaching the signal). Nor can ATC enforce permanent and temporary speed restrictions along the railroad related to curves, stations, bridges, and slow orders placed where track work is underway. ACSES and NJT's compatible system address these needs using a train location system that consists of a transponder and on-board transponder interrogator and computer. While this approach does not appear to be preferred for cost and maintenance reasons outside the NEC, it is well suited to support high density passenger and freight operations within that territory, given the existing signal and train control infrastructure and the predominance of traffic that is limited to the NEC and immediately associated lines.

In summary, a wide range of actions are being taken to deploy PTC, but much remains to be done. Although I am heartened that several freight railroads are exploring additional PTC technologies beyond those I have described in this statement, I am concerned that the industry's commitment to interoperability of systems has not yet yielded comprehensive industry standards. Further, much of the electronic hardware now being deployed on locomotives for various purposes is not known to be forward-compatible with PTC – another objective recognized by the RSAC. I am troubled that the four major freight railroads are often unable to agree among themselves on relevant issues within industry councils, and I am also concerned that the fragility of Amtrak as a leader in the passenger field may inhibit its ability to progress technology. The reluctance of major suppliers to commit capital to system development, given the history of advanced train control systems, is a further cause for concern.

Advanced train control providing PTC safety features was supposed to be the legacy of the 1990s, and so the future is overdue. We will continue to prepare the way for PTC deployment, chastened by the hard realities but also convinced that this technology will be essential for safety, security, and the economic and environmental health of the Nation as we progress through this first decade of the new millennium.

Grade Crossing and Trespasser Safety

Grade crossing and trespasser incidents account for about 95 percent of all deaths related to train operations. Yet FRA's regulatory and enforcement authorities are of limited value in addressing these two areas. Significant improvements on these subjects are more likely to result from effective and intensive educational efforts directed at potential victims of these kinds of incidents, aggressive enforcement of state and local laws concerning motorist responsibilities at crossings and access to railroad property, funding for physical improvements that reduce the likelihood of mishaps, and productive research on technological solutions and behavioral factors. Substantial improvement of the grade crossing picture has occurred through just these sorts of methods. Grade crossing deaths were down 40 percent in 2001 from their level in 1990, even though exposure has risen due to increased highway and rail traffic. Operation Lifesaver®, Inc., and similar educational initiatives have spread the message to motorists that ignoring grade crossing warning devices, whether passive or active, is flirting with disaster. FRA field forces, especially our Regional Grade Crossing Safety and Trespasser Prevention Managers and Assistant Managers, are actively engaged in these efforts in communities across the nation. We have worked with Operation Lifesaver® on a variety of public service announcement campaigns designed to raise awareness. One example is the Albertsons/FritoLay Rail Safety Contest that brought our safety message to 138 Albertsons Food Stores in the Pacific Northwest, including an announcement in the stores' weekly circulars that reach 3.3 million people. We have also persuaded the entertainment media and advertisers to withdraw commercials or other portrayals of unsafe behavior around railroad tracks. FRA has long partnered with state and local law enforcement authorities to encourage their aggressive enforcement of highway laws related to crossings. We have three part-time regional law enforcement officers to promote our National Law Enforcement Liaison program, now in its third year. FRA worked with Operation Lifesaver® in the production of a video aimed specifically at patrol officers and with state law enforcement training officials to develop a course on crossing safety and trespass issues. FHWA has been a partner of FRA and Operation Lifesaver® in many of these efforts.

Partnering with FMCSA, Operation Lifesaver®, and trucking associations, FRA has made concerted efforts to educate the drivers of commercial vehicles on the importance of highway-rail grade crossing safety. FRA was instrumental in having Operation Lifesaver instruction included in the new driver training curriculum for Swift Trucking Company, one of the largest in the nation. This program will reach approximately 15,000 drivers each year.

Relying primarily on Section 130 funding made available by FHWA, most states have gradually upgraded crossing warning devices, especially at the state's most dangerous crossings. Since its inception in 1975, FHWA estimates the section 130 program has been responsible for the construction of 30,000 active crossing warning devices that helped prevent more than 10,000 deaths and over 50,000 injuries. Of course, scores of thousands of crossings still have only passive warning devices, and collisions continue to occur at crossings with fully operational active warning devices where motorists disregard the warnings. Supplementary safety measures (e.g., traffic channelization devices or four-quadrant gate systems) that would prevent such behavior have generally not been installed. We work extensively with railroads and local communities to identify crossings suitable for closure because they are either redundant or no longer needed and to plan crossing improvements on a corridor basis rather than looking at each crossing in isolation.

FRA's regulatory authority can play some role. Our rule on maintenance, inspection, and testing of active warning devices (49 C.F.R. Part 234) helps ensure that those devices are fully operational and that railroads take proper precautions when the devices malfunction. We are working on a final rule on the use of train horns at crossings, attempting to achieve a risk-based balance between the need for the warning that the train horn provides (which protects drivers and train occupants) and the need for reasonable restrictions on train horn noise for the sake of residents near crossings. We are also working on a rule that would require a phased-in implementation of retroreflective markings on rail cars, which would help provide additional warning to motorists at night.

Making safety gains in the trespasser area presents great challenges. Despite the daily work of very aggressive railroad police forces, the railroad system is simply too vast to prevent trespassing along

its entire length. While detection systems can be designed to detect actions by trespassers with evil intentions, the people who are dying rarely are tampering with railroad equipment and structures. Instead, trespassers are often on railroad property because it is convenient as a route to their home, employment, or recreational destination or, sadly, in some cases, because they intend to take their own lives. To target the people most likely to trespass, we are conducting a pilot project to develop demographic information on railroad trespassers based on railroad police reports. We can use this information to design audience-specific educational campaigns and enforcement.

FRA is funding a demonstration project in Pittsford, New York, that uses video cameras and motion sensors to detect trespassers on a railroad bridge. A verbal warning is issued to the trespassers, and the railroad and local law enforcement agency are notified as necessary. This installation has already proved effective when two teenagers were warned to get off the bridge and a train arrived one minute later. FRA is also working with Operation Lifesaver®, Transport Canada, and Direction 2006 (Canada's crossing safety and trespass prevention coalition) to provide a simple, easy-to-use, problem solving methodology to enable communities to effectively address trespassing issues.

Railroad Security

Security is a critical part of railroad safety. The events of September 11 focused FRA's attention on the need to address whatever security vulnerabilities may exist in the railroad system. Under AAR leadership, the rail industry has conducted its own assessment of those risks. FRA has retained a contractor to review AAR's work, which will help us to decide what action FRA may need to take in this area. We would, of course, coordinate any such action with the Transportation Security Administration (TSA), the new administration within the Department that has overall responsibility for transportation security among all modes of transportation, including rail and transit lines, and with the Department of Homeland Security, once it is established. Meanwhile, the increased awareness of security issues will cause us to bring such issues into sharper focus in our rulemaking projects. For example, threats to security that might prevent the proper functioning of a PTC system will need to be considered.

Furthermore, FRA is working in partnership with the FTA to assess the security of commuter railroads. FRA and FTA are jointly funding security risk assessments on the ten largest commuter railroad systems. FRA is also funding a similar security risk assessment for Amtrak. These security risk assessments are intend to identify potential security risks and appropriate security enhancements to mitigate those risks. We will also coordinate these efforts with TSA.

The Administration's Rail Safety Reauthorization Proposal

The Secretary has just recently transmitted to Congress the Administration's proposal for reauthorization of the railroad safety program. Authorization for the program expired at the end of fiscal year 1998. Our proposed legislation would reauthorize this important safety mission for four years. The bill proposes other measures that would significantly advance railroad safety, primarily by enhancing the Secretary's authority to gather information that will help to assess and reduce or offset hazards at highway-rail crossings. The bill would also underscore the Secretary of Transportation's duty, when issuing rail safety regulations or orders that affect the security of railroad operations, to consult the Secretary of the department having responsibility for transportation security under the Aviation and Transportation Security Act if those responsibilities are transferred outside of the Department of Transportation.

The bill seeks to prevent highway-rail grade crossing collisions, which, as discussed above, cause about half of all rail-related deaths each year. The bill proposes a measure that would improve the Department's National Crossing Inventory (Inventory), a large computerized database containing vital safety information on the identification, location, physical characteristics, and other salient features of at-grade and grade-separated highway-rail crossings nationwide. The Department, as custodian of the Inventory, acts as a clearing house by combining the data supplied by both railroads and states into a uniform database. Many states rely upon this Inventory in making decisions about which crossings need better warning systems. As the only nationwide database that contains the characteristics of crossings, the Inventory is used extensively by the Department, states, railroads, and researchers for crossing safety studies. Currently, reporting to the Inventory by both states and railroads is voluntary;

some information is missing, and some is very outdated. The bill would require that railroads and states make initial reports to the Inventory about new and previously unreported crossings and provide periodic updates for all crossings, so that the crossings can be accurately ranked according to risk. These improved rankings will assist states in identifying which of the crossings are the most hazardous and in channeling Federal safety improvement funds to the most hazardous crossings first.

Other highlights of the bill include provisions that would make other necessary enhancements to FRA's delegated inspection and rulemaking authority. For example, one section would permit FRA inspectors to monitor a railroad's radio communications outside the presence of the railroad's personnel for accident investigation and accident prevention purposes, and to use the information received for such purposes except for release to a railroad carrier or as direct evidence of railroad safety violations. Another section would allow FRA, with the concurrence of the Administrator of the Environmental Protection Agency, to regulate noise emissions from the right of way due to the passage of a high-speed train at more than 150 miles per hour.

Enactment of the Administration's proposed bill would support FRA's efforts to address security threats to railroad operations, to reduce collisions at highway-rail crossings, and generally to reduce casualties and damages associated with railroad operations.

Conclusion

The recent railroad accidents of concern to the Committee must be fully examined for any lessons they can teach about future accident prevention. However, those accidents are not an indication of fundamental safety deficiencies in the railroad industry. While certain problem areas require concerted attention, the overall industry safety record is generally very positive, and FRA and its many safety partners work daily to make it more so.